

REMARKS

Claims 1-21 are currently pending.

Claims 3-13, 5-19, and 21 are as originally filed. Each of claims 1, 14, and 20 have been amended to provide proper antecedence. Claim 2 has been amended to provide consistency within the claims. Amended claim 2 now specifies that the polarisation switch is operable in a second mode of operation. An example of support for this amendment is found in claim 14, as originally filed. No new subject matter has been introduced.

Claims 1-7, 11, 13-17 and 20 have been rejected under 35 U.S.C. 102 (b) as being anticipated by Yao (US 6,687,423). These rejections are respectfully traversed.

With regards to the reference itself, Applicant submits that Yao's teachings were only patented/published on February 3, 2004. Since this subject matter was not available more than one year prior to our application date, it is not valid prior art under 35 U.S.C. 102 (b). Nevertheless, the following remarks are provided in the event this reference is deemed citable under a different section of 35 U.S.C. 102.

With regards to claim 1, it is submitted that Yao does not teach providing first and second polarisation switches, and in particular, does not teach that each polarisation switch is for selectably rotating the polarisation of a beam of light launched therethrough and that each switch is configured to work in cooperation with the other.

Yao teaches an add/drop filter including a polarizing beamsplitter (102), two polarisation transformers (130A and 130B), two optical bandpass filters (140A and 140B), and two optical circulators (1010 and 1020). Applicant argues that the optical circulators taught by Yao are not polarisation switches. In fact it is submitted that these optical circulators are, on a whole, unable to switch the polarisation of an incident beam of light between two states. Applicant further argues that these optical circulators are not for selectably rotating the polarisation of a beam of light launched therethrough. While the optical circulators may include components that individually rotate the polarisation of light, such a rotation is not selectable (i.e., for a given incident beam of light the rotation will always be the same).

With regards to amended claim 2, it is submitted that Yao does not teach that the first polarisation switch is operable in a first mode of operation that allows at least a portion of a beam of light launched from the first input port to be directed to one of the first and second output ports via the filter, and a second mode of operation that allows the beam of light to be directed to the other of the first and second output ports bypassing the filter. The optical circulators taught by Yao only operate in a single mode of operation. If the first input port defined in claim 1 is said to correspond to port C of 1010 in Yao's device, then λ'_1 is input at port C of the optical circulator 1010 and output at port A so that the optical signal is ultimately output the add/drop filter at the output port as 1030. Neither optical circulator (1010 and 1020) operates in a mode of operation that allows λ'_1 to bypass a bandpass filter and/or to exit a different output port. Similarly, if the input port defined in claim 1 is said to correspond to the input port of Yao's device (i.e., near 110), then it is submitted that the optical circulator 1010 only operates in a mode of operation that allows λ_1 to exit from port B while the remaining wavelength channels exit from the output port as 1030.

With regards to claim 6, it is submitted that Yao does not teach that the first input and first output ports are express ports, while the second input and second output ports are add and drop ports, respectively. Specifying this combination of features allows the add/drop device of the instant invention to be configurable between express passthrough modes of operation and add/drop modes of operation, without physically moving the filter in and out of the optical path (e.g., as discussed on page 2, lines 1-5, page 7, lines 14-24, and page 8, lines 8-29). Notably, the add/drop device taught by Yao is of the type that must be physically moved in and out of the optical path as discussed on page 1, lines 24-29.

Since Yao does not teach every feature defined in claims 1, 2 and 6, as discussed above, these claims are believed to be novel and in allowable form. Similarly, claims 3-5, and 7-13 which depend from these claims are also believed to be in allowable form.

With regards to claim 14, it is submitted that Yao does not teach providing first and second polarisation switches for selectably rotating the polarisation of a multiplexed beam of light. It is further submitted that Yao does not teach that the first polarisation switch is operable

in a first mode of operation wherein the polarisation is switched such that the first polarizing beamsplitter directs the multiplexed beam of light away from the filter, and a second mode of operation wherein the polarisation is switched such that the first polarizing beamsplitter directs the multiplexed beam of light towards the filter. An example of support for these arguments is provided above with regards to claims 1 and 2.

Since Yao does not teach every feature defined in claim 14, as discussed above, this subject matter believed to be novel and claim 14 is believed to be in allowable form. Similarly, claims 15-19, which depend from claim 14 are also believed to be in allowable form.

With regards to claim 20, it is submitted that Yao does not teach launching a first beam of light from the input port to the first polarizing beamsplitter, operating the first polarisation switch in a first mode of operation such that the first polarizing beamsplitter directs the first beam of light away from the wavelength filter, *and* operating the first polarisation switch in a second mode of operation such that the first polarizing beamsplitter directs the first beam of light to the filter.

In the device taught by Yao, an input beam of light 110 is launched from an input port to a polarizing beamsplitter 102. The circulator C ports are add ports, while the B ports are drop ports (see column 11, lines 7-27 of Yao). In no instance will changing the mode of operation of either of the circulators (1010 and 1020) cause the polarizing beamsplitter 102 to direct the input beam of light 110 either away or to a wavelength filter. In fact, the portion of the input beam of light 110 that reaches the optical circulators (1010 and 1020) will only do so after passing through a bandpass filter (140A and 140B, respectively). Once the input beam of light reaches an optical circulator (1010 and 1020), it will be output through port B.

As discussed on page 2, lines 3-5 and 19-22 of the instant application, the polarisation switches work in cooperation with each other and the polarizing beamsplitters to provide a non-moving parts add/drop device that is configurable between express pass-through and add/drop modes of operation. Since the filter does not need to be physically moved in and out of the optical path, the resulting add/drop device is more rugged, durable, and reliable (page 17, lines 18-21).

Since Yao does not teach every feature defined in claim 20, as discussed above, this subject matter is believed to be novel and claim 20 is believed to be in allowable form. Similarly, claim 21, which depends from claim 20 is also believed to be in allowable form.

Claims 8-10, 12, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yao et al. (US 6,687,423 B1).

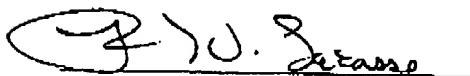
Claims 8-10, 12, 18, and 19 now depend from claims that are believed to be allowable, and thus are also believed to be allowable.

Reconsideration of the claims and an early Notice of Allowance are earnestly solicited.

Should any minor informalities remain after this response, the Examiner is encouraged to contact the undersigned at the telephone number listed below.

The Commissioner is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account No. 50-1465.

Respectfully submitted,



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